

Diving Safety Lines

Fall 2016 Edition

Diving Safety Lines is a semi-annual release by the ORM/Expeditionary Warfare Safety Programs Directorate of the Naval Safety Center. The information contained herein is a summary of research from selected reports of diving hazards to assist you in your mishap prevention program. *Diving Safety Lines* is intended to give advance coverage of safety-related information while reducing individual reading time. This bulletin does not, in itself, constitute authority but will cite authoritative references when available. It is recommended that this bulletin be made available to all hands.

From the Diving Safety Division Head

CWO4 William “Toby” Turner

First off I would like to welcome CPO Jeff Nodine to the Safety Center. He reported onboard in October 2016 from Naval Special Warfare Development Group where he was able to test and develop new gear while working with companies to help create the best product to fit the needs of the Navy. Chief Nodine, “I look forward to traveling and seeing how the different branches and dive lockers are solving issues they have come across and sharing their solutions with the rest of the diving community.”

Secondly, I would like to wish NDCM (MDV) Schoephoerster fair winds and following seas as he transitions into the retired community. His contribution to diving safety in his nearly 5 years here at the Safety Center is extremely noteworthy. He has been relieved by NDCM Billy Gilbert who a few of you may have met during our recent assessments.

Lastly and most importantly I want to discuss a trend I have been seeing across the fleet in my two years here at the Safety Center. Many of you will not want to hear this, but it needs to be addressed. **BLUF:** Chiefs and above need to get smart and/or engaged in running the 3-M program in their respective dive lockers; with the number of PMS discrepancies we are finding it appears that dive locker leadership is either not involved or are not familiar with 3-M program administration. I understand we are all busy with the usual day to day operations and sometimes there just aren’t enough hours in the work day but placing your faith in the PMS work center supervisors and hoping for the best doesn’t cut it, get involved and actually review your work centers, conduct spot checks on maintenance, and perform an in-depth review of your Force Revisions on a regular basis. The old saying, “you get what you inspect, not what you expect”, has never been more true. If you are a Chief or above and are responsible for a PMS work center(s) and you can’t access SKED then you are just plain wrong.

Diving Safety Lines

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Head, Diving & Salvage – CWO4 William “Toby” Turner

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Master Diver's Corner

MCPO (MDV/DSW/EXW/ESW) Billy T Gilbert

For those of you that don't know me, I am Master Diver Billy Gilbert. I checked onboard in July 2016 from Mobile Diving and Salvage Unit Two. I was also stationed as a diver at NSA Roosevelt Roads Puerto Rico, SRF Sasebo Japan, SDV Team TWO Little Creek Virginia, EODTEU TWO Fort Story Virginia, Commander Task Force 56 Bahrain, and Mobile Diving Salvage Unit TWO Little Creek Virginia (twice).

I would like to wish NDCM David Schoephoerster and his family the best as he moves onto new challenges. Thank you for your mentorship and being a strong voice in the dive community.

As I have already been out to a couple of diving commands, there are a couple things I would like to bring up. The lockers I recently inspected showed great pride in ownership, knowledge of their equipment and teamwork.

Problems with the planned maintenance system I have observed were situational requirements not being recorded and "R" checks not being accounted for. If you are having problems with PMS ask for help. Work center supervisors look at your MIP's and MRC'S make sure they're applicable for the equipment you have. Lastly ensure all your equipment is covered.

I look forward to getting out to all the diving commands across the services and seeing old friends, and making some new ones. After being here only a couple of months, I am impressed with the spirit our community has and strongly believe there is nothing Deep Sea can't do.

HOOYAH!! KDSA!!

MCPO (MDV/DSW/EXW/ESW) Billy T Gilbert



CPO (DSW/SW) Fred Taylor

Scheduling Details for the Fiscal Year 2017

Many thanks go out to all the commands we visited around the world in FY-2016! The receptions and hospitality received at each dive locker is what Deep Sea is all about! The year seemed to fly by very fast. The frantic pace was triggered by some minimal manning issues and a heavily loaded calendar but somewhere between the banter of a couple dozen e-mails, quarterly budget requests, and a 'shifting-sands-give-and-take-schedule,' the brotherhood made it all happen! So, with the beginning of FY-2017 freshly underway, I want to hit on some policy changes and bring into line the way ahead for this year's agenda. *Sexy stuff again, I know!*

The Naval Safety Center sent out a naval message at the beginning of October citing all commands which are either due or overdue for a DSA in FY-2017:

R 071422Z OCT 16

PROPOSED FY17 DIVING SAFETY ASSESSMENT (DSA) SCHEDULE

Before the message even hit the street, 19 of the 77 listed commands have already made contact with us and locked in dates... Hoo-Yah and thank you for leaning forward! Our group phone number is DSN 564-3520 X7837 or commercial (757) 444-3520 x7837; e-mail is SAFE-DIVESALVAGE@NAVY.MIL. Contact via e-mail is preferred since we are rarely in the office to field phone calls.

Bolstered by the latest revision of the 3150.27C, Diving Safety Assessments are now a mandatory safety event. The new tone of the message is stricter and places the responsibility of scheduling DSAs on the unit and ISIC.

We will no longer be calling to field dates from the fleet.

We encourage commands to send primary and secondary windows of opportunity to assist in geographically aligning as many units as possible. Manage your DORI and DSA periodicities and inform your ISIC!

From OPNAV 3150.27C,

“All USN activities conducting Navy diving operations must undergo a diving safety assessment (DSA) from the Naval Safety Center (NAVSAFECEN) to provide an independent review of diving safety practices. This survey must be conducted between 9 and 15 months of the command's last DORI or equivalent ISIC inspection. A DSA does not replace or extend the requirement for a DORI.

(a) With ISIC's concurrence, a command may waive the DSA requirement if the DORI or equivalent ISIC inspection periodicity does not exceed 18 months.”

If you receive concurrence from your ISIC to waive the DSA requirement, NSC will require an official Naval Message to waive the assessment. Once firm dates are established for the DSA, if your command is unable to hold to this schedule, an official naval message to decline or reschedule your survey SHALL be sent to Naval Safety Center.



CPO (DSW/EXW/SW/FPJ) Joshua D. Benjamins

First off, I would like to say HOOYAH DEEPSEA. For the last three years I have had the great privilege to go around the world and look at 97% of the diving commands that the Air force (PJ's), Marines, and Navy (Ships, Shore and SUBS) has in their inventory. The preparation prior to the Diving Safety Assessment team's arrival has shown a true belief in Safety across the board. Safety Culture and Climate at each command has improved and continues to keep us all "Mission Capable".

Secondly, with every generation of divers comes new and improved equipment, like our latest hardhat the Kirby Morgan Dive Helmet (KM-37), now replacing the old MK-21 MOD 1 Dive Helmet (AIG 16-13). Personally I have never had the privilege to dive the KM-37 but I'm sure it can't be much different from all the other rigs I've dove in the past 22 years. I also haven't had the obligation to tear down a KM-37 to parade rest and then place every piece back together IAW the PMS Card/Tech manual instructions. I can also imagine it is like the rest of the maintenance I have performed and each step is laid out 1, 2, and 3... in a row. Unfortunately I have found three different commands with the sealed pull pins (cam angle) in multiple wrong positions. One command had one up one down, and the other two commands had the sealed pull pins (cam angle) facing towards the divers ears. Both configurations will not allow the locking collar/neck pad (toilet bowl) to be pushed into position until it locks with the sealed pins.

One key take away from this problem is that the attention to detail of steps and procedures were missed by the qualified 301 maintenance technician performing a significant step on Divers Life Support Equipment. Needless to say all three diving commands immediately remedied the problem and held the proper training for all the divers.

In conclusion, before donning any Diver Life Support equipment each diver should be aware of each moving part and also do a thorough hands on check with the equipment they are about to place their safety in. Stay safe out there DEEPSEA, I'm just the old guy in the white hat who can see the big picture of our Safety World. Dive long, Dive Hard, KDSA!!

FY-16 Dive Mishap/Hazard Analysis

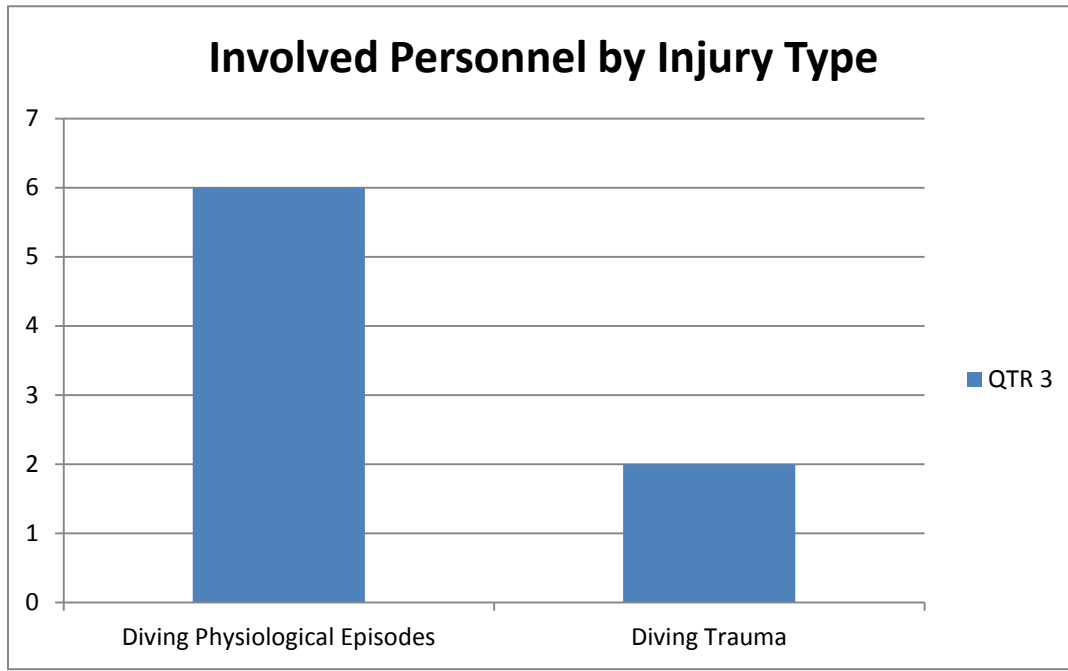


Figure 1. Total Number of Injured Personnel by Injury Type in FY 16Q3 Mishaps

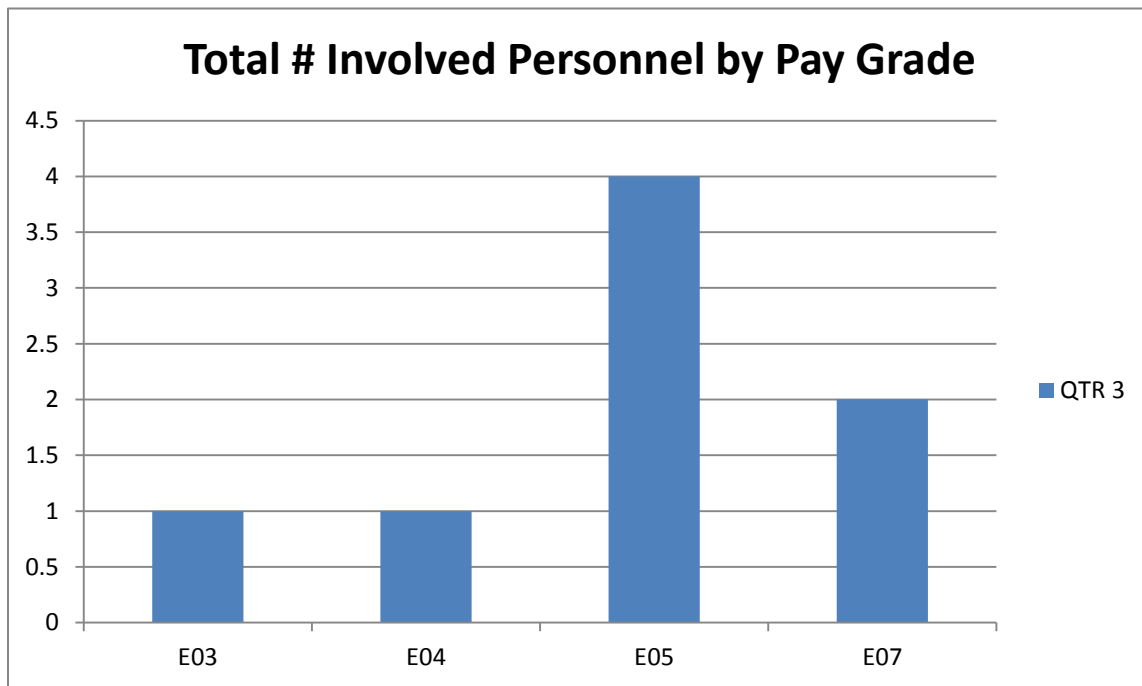


Figure 2. Total Number of Involved Personnel by Pay Grade in FY 16Q3 Mishaps

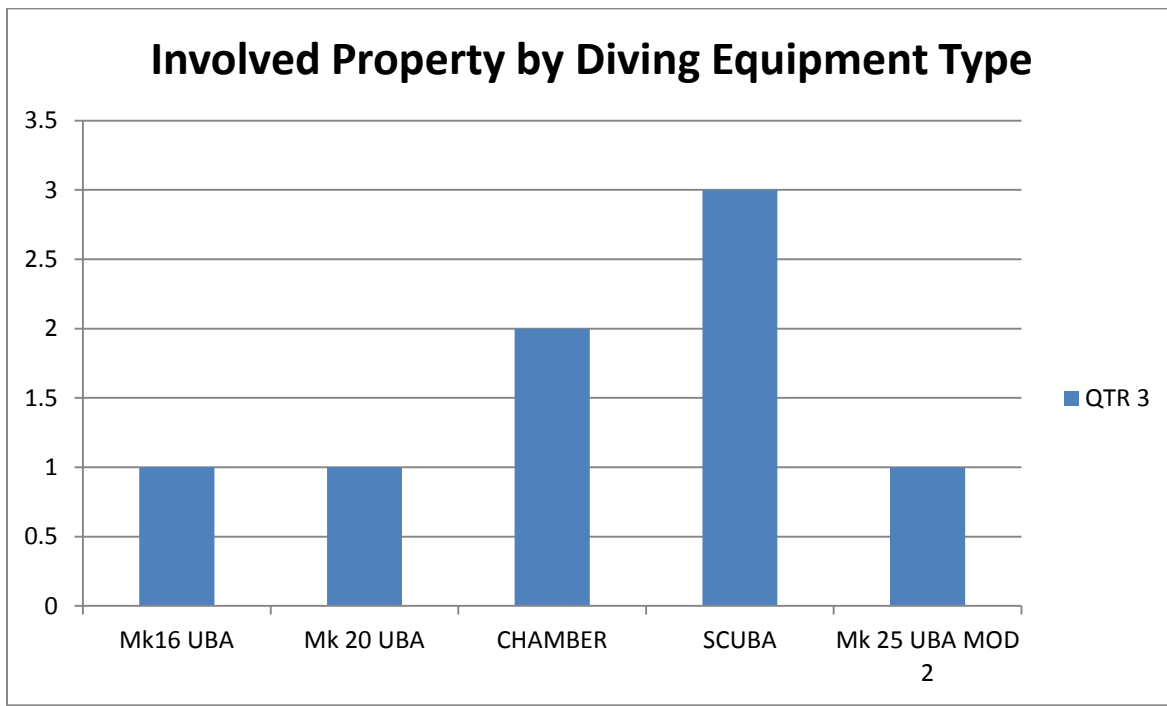


Figure 3. Total Number of Mishaps by Equipment Type in FY 16Q3 Mishaps

During FY 16Q3, there have been 8 reported diving mishaps where injury was incurred. Figure 1 shows that physiological episodes accounted for 80% of mishaps and trauma accounted for 20% of mishaps. Figure 2 shows that personnel in paygrades E3, E4, E5 and E7 were affected. Figure 3 shows that SCUBA was involved in 37.5% of mishaps followed by Chamber at 25% and one MK20 UBA, one MK16 UBA and one MK25 Mod 2 UBA mishap.

Diving Safety Assessment Trends

Diving commands assessed during 3rd QTR 2016. The following Top 5 discrepancies identified during the Diving Safety Assessments (DSA):

- 30% of assessed commands have not had a Diving Operational Readiness Inspection (DORI) in the past 24 months
- 28.6% of assessed commands did not have MK20 test kit and tools available
- 25% of assessed commands have not conducted thorough risk assessments for all command operations, tasks, and activities including new or complex evolutions.
- 23.1% of assessed commands did not have all SCUBA equipment covered in PMS
- 20% of assessed commands had drugs and consumables in the primary and secondary medical kits that were not in satisfactory condition or had expired (no extension paperwork available).

Diving commands assessed during 4th QTR 2016. The following Top 5 discrepancies identified during the Diving Safety Assessments (DSA):

- 31.3% of assessed commands have not implemented PMS for all diving and diving support equipment
- 25% of assessed commands do not have a complete and up to date diving instruction
- 18.8% of assessed commands do not have all diving equipment serialized for tracking PMS accomplishment
- 14.3% of assessed commands do not have eyewash stations available or they are not properly maintained.
- 13.3% of assessed commands do not have supporting OQE for proof test of charging whips or charging whips are tested to incorrect pressure for system.

USCG Liaison



DVC Loren Powers

Hello everyone. My name is DVC Loren Powers and I reported aboard in July 2016 after completing a very rewarding tour at Regional Dive Locker East RDLE. I come in replacing the newly promoted CWO Mike West who is now doing Head Quarters duty making things better for Coast Guard Diving.

Since reporting I have had the chance to get out to a few dive lockers and get up to speed with the business of conducting diving safety assessments and USCG DORA's. One area I have observed for future improvement is medical response by dive side personnel. Specifically mastering the basics of emergency response with regards to vitals, blood pressure and air way.

I look forward to getting a chance to travel quite a bit and visit Navy, Marine Corps, Air Force and Coast Guard dive lockers all over the world. The main reason I wanted to come to NSC was to learn more about all military diving. In the short time I have been here there are many things I have learned. If there is anything I can do to help, please give me a call or shoot me an email.

Top Diving Commands

04/13/2016 to 11/02/2016

Navy

Total Number of Dives: 48,987

Top Ten Diving Commands:

6,356	N49746	NSW BASIC TRNG COMMAND
5,709	N0610A	NAVDIVESALVTRACEN PANAMA CITY, FL
2,098	N47898	NSW DEVELOPMENT GROUP
2,091	N41150	NORFOLK NAVAL SHIPYARD AND IMF
1,600	N55236	SOUTHWEST RMC SAN DIEGO, CA
1,575	N32253	PEARL HARBOR NAVSHIPYD AND IMF
1,231	N62640	NAVSCOLEOD EGLIN AFB FL
1,196	N42270	MDSU 1 (SEA)
1,173	N39589	NSWG 1 TRAINING DET
1,148	N30202	EODTEU 1

Coast Guard

Total Number of Dives: 802

All Diving Commands:

261	G15265	REGIONAL DIVE LOCKER PACIFIC
241	G34273	REGIONAL DIVE LOCKER EAST
161	G32426	REGIONAL DIVE LOCKER WEST
115	G70400	AVIATION TECHNICAL TRAINING CENTER
24	G73920	CGLO-NDSTC

Marine Corps

Total Number of Dives: 6,126

Top Ten Diving Commands:

2,811	M06050	MC DIVE SCHOOL (NDSTC)
793	M20905	MARINE RAIDER REGIMENT
696	M20920	1ST MARINE RAIDER BATTALION
604	M08321	2ND RECON BN, 2ND MARDIV
412	M67360	3RD RECON BN, 3RD MARDIV
346	M14706	H&S / C CO, 4TH RECON BN, 4TH MARDIV
311	M11009	1ST RECON BN, 1ST MARDIV
121	M37101	MARINE CORPS SYSTEMS COMMAND
32	M28353	4TH FORECONCO

Army

Total Number of Dives: 6,439

Top Ten Diving Commands:

2,994	W1E0C0	SPECIAL FORCES UNDERWATER OPS SCHOOL
544	WHQLA0	3RD SPECIAL FORCES GROUP
484	W4K724	US ARMY ENG DIVE SCHOOL (A/169)
473	WDSMAA	5TH SPECIAL FORCES GROUP
422	WHKXAA	86TH ENGR DET (DIVE)
389	WDSNAO	7TH SPECIAL FORCES GROUP
231	WDBRAA	7TH ENGR DET (DIVE)
218	WH08AA	10TH SPECIAL FORCES GROUP
164	WCZ1AA	569TH ENGR DET (DIVE)
131	WTPEAA	20th SPECIAL FORCES GROUP

Air Force

Top Ten Diving Commands:

2,229	FFGS70	AF COMBAT DIVE SCHOOL (NDSTC)
383	FFF3N6	24TH SPECIAL TACTICS SQUADRON
344	FFF3M0	SPECIAL TACTICS TRAINING SQUADRON
213	FB4830	38TH RESCUE SQUADRON
181	FFFQBF	21ST SPECIAL TACTICS SQUADRON
149	FFFJ84	320TH SPECIAL TACTICS SQUADRON
141	FFB700	48TH RESCUE SQUADRON
102	FFFP8J	22ND SPECIAL TACTICS SQUADRON
101	FFF6Q	123RD SPECIAL TACTICS SQUADRON
85	FF4559	58TH RESCUE SQUADRON